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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/820,537	03/29/2001	Yuji Karakawa	1115.65380	4187

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EXAMINER

PATEL, GAUTAM

ART UNIT	PAPER NUMBER
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2655

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DATE MAILED: 11/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/820,537

Applicant(s)

KARAKAWA ET AL.

Examiner

Gautam R. Patel

Art Unit

2655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 9-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3, 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

#7

DETAILED ACTION

1. Claims 1-18 are pending for the examination. Claims 1-8 are elected.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. § 119(a)-(d), which papers have been placed of record in the file.

Election/Restriction

3. Claims 9-18 withdrawn from further consideration by the examiner, 37 C.F.R. § 1.142(b) as being drawn to a non-elected species [species other than fig. 1-5]. Election was made **without** traverse in Paper No. 6 dated 9-22-03.

Applicant is reminded that **upon the cancellation of claims to a non-elected invention, the inventorship must be amended** in compliance with 37 C.F.R. § 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a diligently-filed petition under 37 C.F.R. § 1.48(b) and by the fee required under 37 C.F.R. § 1.17(h).

Drawings/Objection

4. The drawings are objected for following reasons:

Figures 1-2 are not designated by a legend such as "Prior Art". The legend is necessary in order to clarify what applicant's invention is (see MPEP § 608.02g).

Applicant is required to submit a proposed drawing correction in response to this Office Action. Any proposal by the applicant for amendment of the drawings to cure defects must consist of **two** parts:

Art Unit: 2655

1. A separate letter to the Draftsman in accordance with MPEP § 608.02 (r); and,
2. A print or pen-and-ink sketch showing changes in *red ink* in accordance with MPEP § 608.02 (v).

IMPORTANT NOTE: The filing of new formal drawings to correct the noted defect may be deferred until the application is allowed by the examiner, but the print or pen-and-ink sketch with proposed corrections shown in *red ink* is required in response to this Office Action, and may not be deferred.

Content of Specification

5. The disclosure is objected for following reasons.
 - a. This application does not contain an Abstract of the Disclosure as required by 37 C.F.R. § 1.72(b). An Abstract on a separate sheet is required.

Applicant is reminded of the *proper content* of an Abstract of the Disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains.

The abstract should be in narrative form and generally limited to a **single paragraph** on a separate sheet within the range of 50 to 250 words. It is important that the abstract not exceed 250 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said", should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," *etc.*

In the present abstract the invention itself is not described, **abstract is vague and in two paragraphs**. Correction is required.

b. The title of the invention is neither precise nor descriptive. A new title is required which should include, using twenty words or fewer, claimed features that differentiate the invention from the Prior Art. It is recommended that the title should reflect the gist of or the improvement of the present invention.

Corrections are required.

Claim Rejections - 35 U.S.C. § 112

6. The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-8 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 7, lines 8 and 2 respectively discloses "a recording state changing section" for changing a recording state. The specification page 12, lines 19-22 defines this section as "electromagnet 150, the laser diode 130, the write circuit 132, the objective lens 141, the MPU 120 and **others** [emphasis added] constitute an example the recording state changing section according to present invention.". since "others" is not defined and it is an open ended statement. The recording state changing section is indefinite and structure of this section is confusing and unclear.

Claim Rejections - 35 U.S.C. § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 2655

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 and 7-8 are rejected under 35 U.S.C. § 102(b) as being anticipated by Tokumitsu et al., US. patent 4,833,665 (hereafter Tokumitsu).

As to claim 1, Tokumitsu discloses the invention as claimed [see Figs. 1-6, especially 3 and 5-6] including a mark reading section and a recording state changing section, comprising:

a mark reading section [fig. 1, unit 3] for reading a mark written on an information storage medium, said information storage medium which has a recording area divided into a plurality of regions, on which information is recorded by writing a mark, and from which information is reproduced by reading the recorded mark [abstract; col. 1, line 67 to col. 2, line 6 and col. 3, line 49 to col. 4, line 20]; and

a recording state changing section [fig. 1, units 1, 2 and 3] for changing a recording state in an adjacent region situated next to a failed region from which said mark reading section fails to read a mark among a plurality of said regions so that cross talk caused due to said adjacent region can be reduced if said mark reading section fails to read said mark, said mark reading section again reading a mark in said failed region after changing a recording state in said adjacent region by said recording state changing section [abstract; col. 1, line 67 to col. 2, line 6 and col. 3, line 49 to col. 4, line 20].

8. As to claim 2, Tokumitsu discloses:

said recording state changing section erases a mark written in said adjacent region [abstract; col. 1, line 67 to col. 2, line 6 and col. 3, line 49 to col. 4, line 20].

9. As to claim 3, Tokumitsu discloses:



said recording state changing section writes on an overwriting basis in said adjacent region a mark generating cross talk lower than cross talk caused due to a mark written in said adjacent region [abstract; col. 1, line 67 to col. 2, line 6 and col. 3, line 49 to col. 4, line 20].

10. As to claim 7, Tokumitsu discloses:

said recording state changing section changes a recording state in an adjacent region after evacuating information recorded in said adjacent region and restores said evacuated information in said adjacent region after again reading a mark in said failed region by said mark reading section [abstract; col. 1, line 67 to col. 2, line 6 and col. 3, line 49 to col. 4, line 20].

11. As to claim 8, Tokumitsu discloses:

information storage medium includes an alternative region used in place of said region according to needs, said recording state changing section performing evacuation of information recorded in said adjacent region to said alternative region and registration of use of said alternative region instead of said adjacent region before changing a recording state in said adjacent region [abstract; col. 1, line 67 to col. 2, line 6 and col. 3, line 49 to col. 4, line 20].

Claim Rejections - 35 U.S.C. § 103

12. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the

Art Unit: 2655

examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

13. Claims 4-6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Tokumitsu as applied to claims 1-3 and 7-8 in view of Matsumoto et al., US. patent 6,407,979 (hereafter Matsumoto).

As to claim 4 Tokumitsu discloses all of the above elements, including an optical disk system, and said recording state changing section writes on an overwriting basis. Tokumitsu does not specifically discloses details of the lengths of the marks in adjacent regions that can be written.

However, it is well known in the art that most systems adjust the marks depending upon the thickness of the substrate and amount of power being used to write the marks and weaker power produces smaller marks. Also Matsumoto clearly discloses:

said adjacent region a mark having a length shorter than that of a mark written in said adjacent region [col. 9, lines 57-67 and col. 10, lines 24-38]. Both Tokumitsu and Matsumoto are interested in improving the storage mechanism in an optical disk device, and are trying to do high density recording by similar means. Both are managing the different tracks and/or sectors to store more information.

One of ordinary skill in the art at the time of invention would have realized that it is necessary to maintain a desirable read signal level. However, the land or groove reflection coefficients are generally vary based on the groove depth, thus causing data read out errors. And in order to avoid these kind of errors one must change the size and/or depth of the marks. Therefore, it would have been obvious to have used a shorter mark in the adjacent region in the system of Tokumitsu as taught by Matsumoto because one would be motivated to reduce noise or cross talk in the system of Tokumitsu and provide better signal to noise ratio by controlling the length and/or widths of the marks, thus improving tracking and access and avoid erroneous erasure [col. 4, lines 33-43; Matsumoto].

14. As to claim 5, Matsumoto discloses:

said recording state changing section writes on an overwriting basis in said adjacent region a mark having a width narrower than that of a mark written in said adjacent region [col. 9, lines 57-67 and col. 10, lines 24-38]

15. As to claim 6, Matsumoto discloses:

said recording state changing section writes on an overwriting basis in said adjacent region a mark with power weaker than power used when a mark is written in said adjacent region [col. 9, line 41-67].

Other prior art cited

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1. Yoshinari et al. (US. patent 6,333,913) Optical recording medium..
2. Kimura et al. (US. patent 5,991,252) Method and apparatus for reducing the width of marks written in optical media
3. Nakamura (US. patent 6,165,579) Optical information recording medium ..
4. Nishikawa (US. patent 6,128,270) Optical information recording ..
5. Majima et al. (US. patent 6,324,660) Defect management method ...
6. Fuji (US. patent 6,310,846) **Method for controlling the recording conditions for a second mark using previously determined reproducing conditions for a first mark for optical memory device.**
7. Dahlerud et al. (US. patent 6,266,201) Multiple channel rewrite system
8. Takeda et al. (US. patent 6,018,507) Method of an apparatus for recording data

Contact information

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gautam R. Patel whose telephone number is

Art Unit: 2655

(703) 308-7940. The examiner can normally be reached on Monday through Thursday from 7:30 to 6.

The appropriate fax number for the organization (Group 2650) where this application or proceeding is assigned is (703) 872-9314.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Doris To can be reached on (703) 305-4827.

Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist whose telephone number is (703) 305-4700 or the group Customer Service section whose telephone number is (703) 306-0377.

A handwritten signature in black ink, appearing to read "Gautam R. Patel", with a long horizontal line extending to the right.

Gautam R. Patel
Patent Examiner
Group Art Unit 2655

November 4, 2003